

BYV27-600-TAP Datasheet

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DiGi Electronics Part Number	BYV27-600-TAP-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	BYV27-600-TAP
Description	DIODE AVALANCHE 600V 2A SOD57
Detailed Description	Diode 600 V 2A Through Hole SOD-57

This model BYV27-600-TAP is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

BYV27-600-TAP

Series:

-

Technology:

Avalanche

Current - Average Rectified (Io):

2A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

5 μ A @ 600 V

Mounting Type:

Through Hole

Supplier Device Package:

SOD-57

Base Product Number:

BYV27

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

600 V

Voltage - Forward (Vf) (Max) @ If:

1.35 V @ 3 A

Reverse Recovery Time (trr):

250 ns

Capacitance @ Vr, F:

-

Package / Case:

SOD-57, Axial

Operating Temperature - Junction:

-55°C ~ 175°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

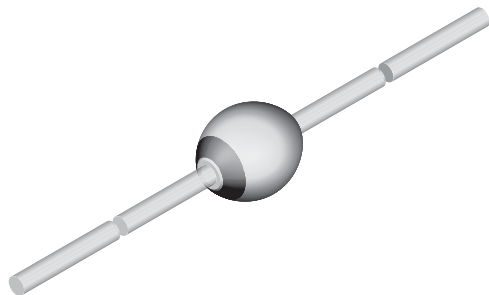
ECCN:

EAR99


www.vishay.com
BYV27-600

Vishay Semiconductors

Ultra-Fast Avalanche Sinterglass Diode



949539

DESIGN SUPPORT TOOLS

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3D
Models
Available

MECHANICAL DATA

Case: SOD-57

Terminals: plated axial leads, solderable per MIL-STD-750, method 2026

Polarity: color band denotes cathode end

Mounting position: any

Weight: approx. 369 mg

FEATURES

- Glass passivated junction
- Hermetically sealed axial-leaded glass envelope
- Low reverse current
- Ultra fast soft recovery switching
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Electronic ballast
- SMPS

ORDERING INFORMATION (Example)

DEVICE NAME	ORDERING CODE	TAPED UNITS	MINIMUM ORDER QUANTITY
BYV27-600	BYV27-600-TR	5000 per 10" tape and reel	25 000
BYV27-600	BYV27-600-TAP	5000 per ammpack	25 000

PARTS TABLE

PART	TYPE DIFFERENTIATION	PACKAGE
BYV27-600	$V_R = 600\text{ V}$; $I_{F(AV)} = 2\text{ A}$	SOD-57

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYV27-600	$V_R = V_{RRM}$	600	V
Peak forward surge current	$t_p = 10\text{ ms}$, half sine wave		I_{FSM}	50	A
Average forward current	$T_{amb} = 50\text{ }^\circ\text{C}$, $I = 10\text{ mm}$		$I_{F(AV)}$	2	A
Non repetitive reverse avalanche energy	Inductive load, $I_{(BR)R} = 400\text{ mA}$		E_R	10	mJ
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	$^\circ\text{C}$

MAXIMUM THERMAL RESISTANCE ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction ambient	Lead length $l = 10\text{ mm}$, $T_L = \text{constant}$	R_{thJA}	45	K/W
	On PC board with spacing 25 mm	R_{thJA}	100	K/W



ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 1 A		V _F	-	-	1.15	V
	I _F = 3 A		V _F	-	-	1.35	V
	I _F = 1 A, T _j = 175 °C		V _F	-	-	0.85	V
	I _F = 3 A, T _j = 175 °C		V _F	-	-	1.15	V
Reverse current	V _R = V _{RRM}		I _R	-	-	5	μA
	V _R = V _{RRM} , T _j = 150 °C		I _R	-	-	150	μA
Reverse breakdown voltage	I _R = 100 μA	BYV27-600	V _{(BR)R}	600	-	-	V
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A		t _{rr}	-	-	40	ns
Forward recovery	I _F = 1 A		V _{FP}	-	3.4	-	V
Forward recovery time	I _F = 1 A		t _{fr}	-	250	-	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

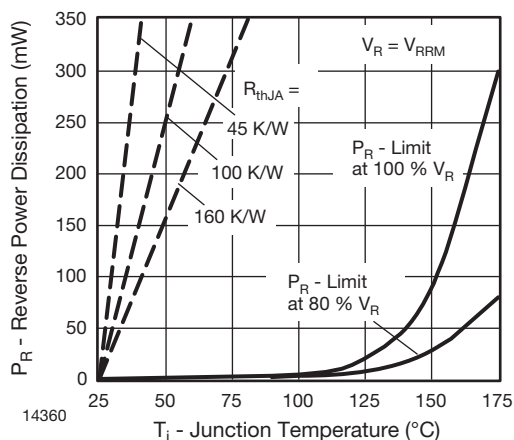


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

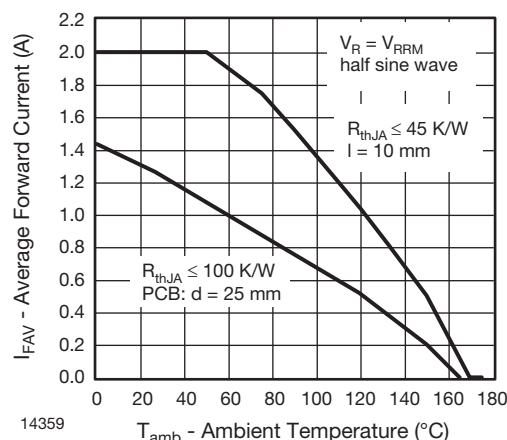


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

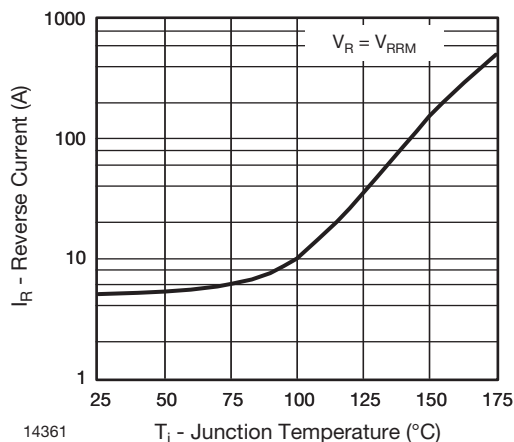


Fig. 2 - Max. Reverse Current vs. Junction Temperature

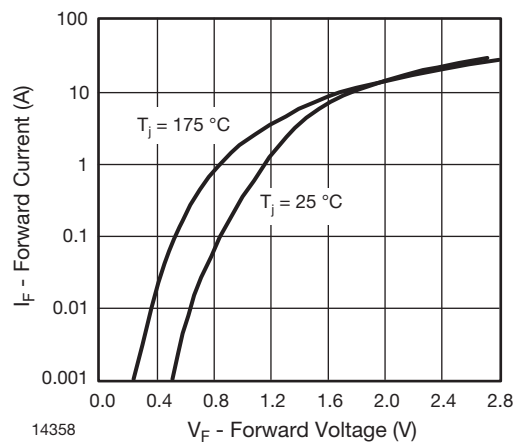


Fig. 4 - Max. Forward Current vs. Forward Voltage

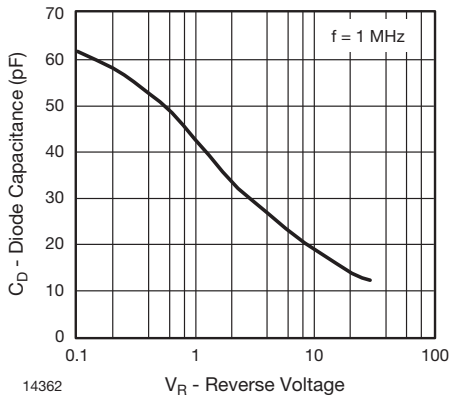
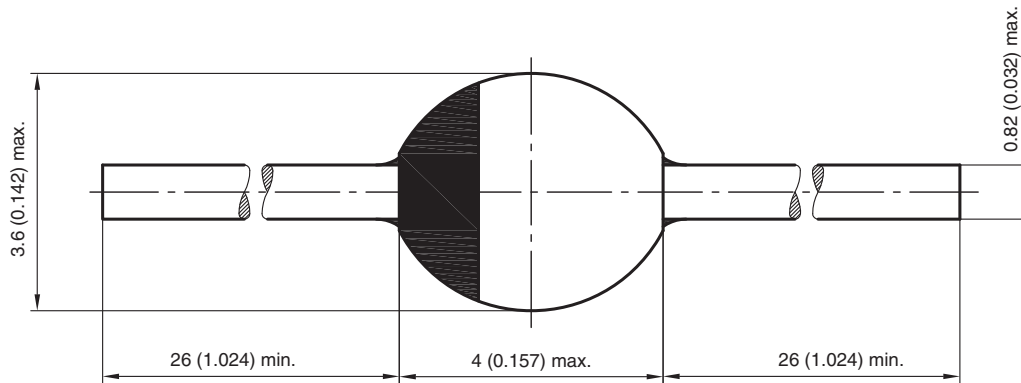


Fig. 5 - Typ. Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **SOD-57**



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